

CLAIMS

1. An apparatus for controlling an operation of a compressor comprising:
- 5 a control unit for generating a control signal for selecting a main winding coil of a linear motor of a compressor or an auxiliary winding coil on the basis of load capacity; and
- a switching unit for selecting the main winding coil of the linear motor or the auxiliary winding coil on the basis of the control signal;
- 10 wherein the main winding coil of the linear motor is divided into a plurality of auxiliary winding coils.
2. The apparatus of claim 1, wherein the control unit generates the control signal for selecting the winding coil of the linear motor or the auxiliary
- 15 winding coil when a voltage applied to the linear motor is varied.
3. The apparatus of claim 1, wherein load capacity is determined based on at least one of an inside temperature of the refrigerator and an ambient temperature.
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4. The apparatus of claim 1, wherein the control unit outputs a control signal for selecting the auxiliary winding coil of the linear motor when at least one of the inside temperature of the refrigerator and the ambient temperature is greater than a predetermined reference temperature value.

5 5. The apparatus of claim 1, wherein the control unit outputs a control signal for selecting the main winding coil of the linear motor when at least one of the inside temperature of the refrigerator and the ambient temperature is the same as or smaller than the predetermined reference temperature.

10 6. The apparatus of claim 1, wherein the control unit generates a control signal for selecting the main winding coil of the linear motor or the auxiliary winding coil in order to control the amount of currents flowing into the winding coil of the linear motor.

7. The apparatus of claim 1, wherein the switching unit is a relay.

15 8. A method for controlling an operation of a compressor comprising:

applying power to a main winding coil of a linear motor of a compressor installed at the refrigerator or an auxiliary winding coil of the linear motor on the basis of an inside temperature of the refrigerator and a predetermined reference temperature value;

20 wherein the main winding coil of the linear motor is divided into a plurality of auxiliary winding coils.

9. The method of claim 8, wherein the applying power comprises applying power to the auxiliary winding coil of the linear motor when the

inside temperature of the refrigerator is greater than the predetermined reference temperature value.

10. The method of claim 8, wherein the applying power comprises
5 applying power to the main winding coil of the linear motor when the inside temperature of the refrigerator is the same as or smaller than the predetermined reference temperature value.